

Policy Best Practices for Accelerating the Deployment of Low-Carbon Energy and Climate Technologies

Session 3: Governmental agencies and policy makers: experiences, challenges and forward thinking

Case for Kazakhstan and Caspian region states

kbaigarin@nu.edu.kz

Kanat Baigarin

Caspian region: overview

| Indicators | KZK  | AZJ  | TKM  | UZB  | Sum | OECD | World |
|------------------------------------|--|---|--|--|-----|------|-------|
| Population density (cap/sqkm) | 6 | 111 | 11 | 69 | -- | 36 | 13.5 |
| Hydrocarbon rents, average (% GDP) | 37 | 56 | 82 | 60 | 55 | -- | -- |
| Energy consumption, 2011 (toe/cap) | 4.7 | 1.4 | 4.8 | 1.6 | 2.7 | 2.9 | 1.9 |
| CO2 emissions, 2011 (tco2/cap) | 14 | 2.9 | 12 | 3.8 | 7.2 | 9.8 | 4.5 |

- 1) Kazakhstan – coal based energy system
- 2) Caspian region is dependent on export of hydrocarbons
- 3) Technological Stock is outdated
- 4) Next 10-15 years opens a window of opportunities

Current trends

- 1) Kazakhstan is the first state of FSU introducing ETS
- 2) Legal basis for RES boost (feed-in tariffs)
- 3) Strategic turn toward Green Economy
 - Strategy “Kazakhstan – 2050”
 - Concept of transition to Green Economy
- 4) Regional Technological Network of Central Asian States (Green Bridge)
- 5) Program “Energy Saving 2020”

| Target | 2020 | 2030 | 2050 |
|--|---------------------------------|------|------|
| Energy intensity of GDP (2008 = 100%) | 75% | 70% | 50% |
| Share of alternative sources of energy | Solar and Wind: ≥ 3% by 2020 | 30% | 50% |
| CO2 emissions (2012 = 100%) | 100% | 85% | 60% |

Exploring regional hydrocarbons export potential for Caspian States

- 1) Quantitative economical assessment of synergy potential of region
 - 2) Economic losses from non-cooperation
 - 3) Support for decision-making in infrastructural investments
- ❖ The efficiency of the regional energy system could increase from 51% (in 2009) to 67% (in 2030) and this could lead to annual savings worth 10-15 billion USD for the whole region.
 - ❖ The direct economic benefit of cooperation on export of hydrocarbons to Europe in 2020-2030 varies depending on studied export routes (1 – 2 billion USD annually via Russian direction, 7-10 billion USD annually via Mediterranean direction).
 - ❖ Kazakhstan could keep its GHG emissions constant to the 2010 level of about 240 MtCO₂eq till 2030 and save 4-5 billion USD annually for 2025-2030 in case of regional cooperation.

Energy efficiency potential of Kazakhstan

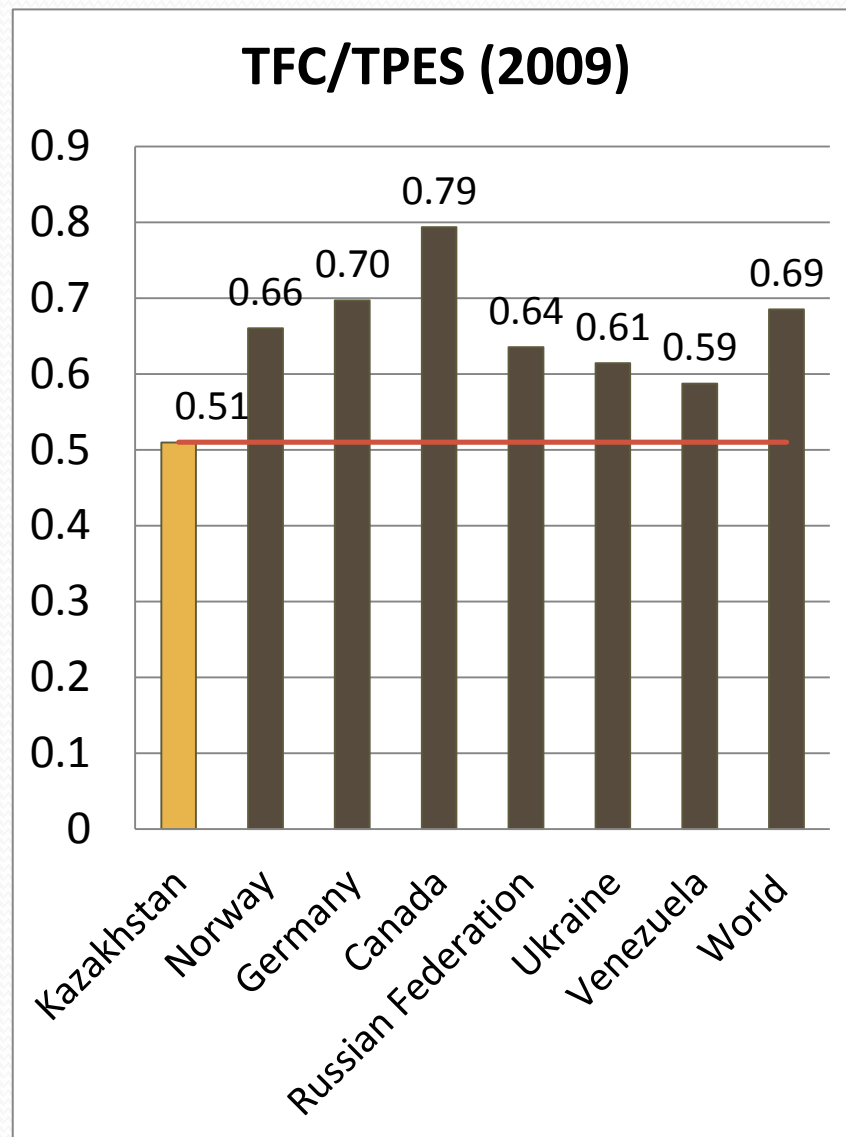
Reasons of inefficiencies:

Geographical: the continental climate, large territory and low population density;

Administrative and economic: above normative losses, opaque energy statistics, lack of metering for energy saving, low profitability;

Technical: high wear of the equipment in the energy intensive sectors, high wear of electric lines, dilapidation of the housing stock.

Some significant cost-effective improvements can be gained even without a specific energy policy in case of reduction (elimination) of the market barriers (low priority of energy issues, incomplete markets for energy efficiency, distortionary fiscal and regulatory policies, insufficient, or inaccurate information).



Economic growth and climate change for Kazakhstan

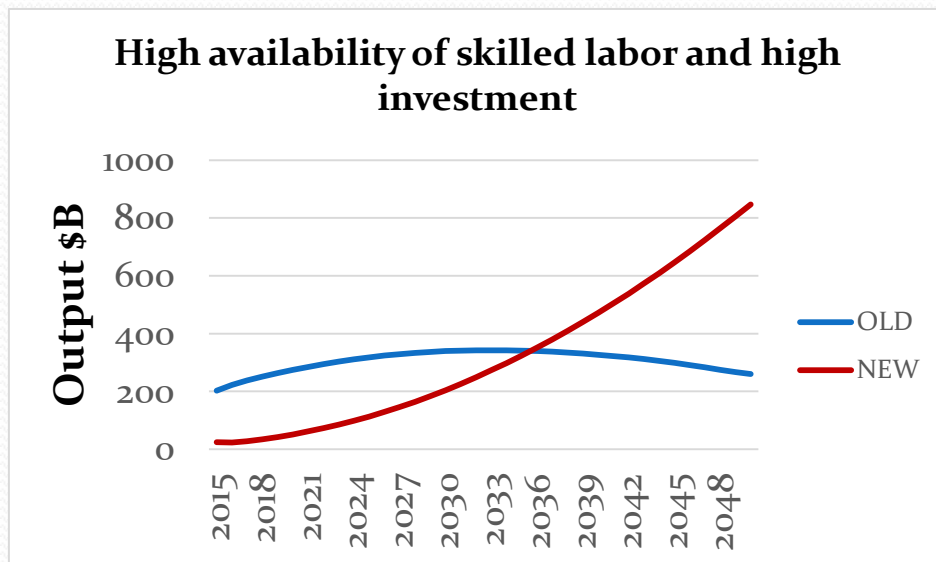
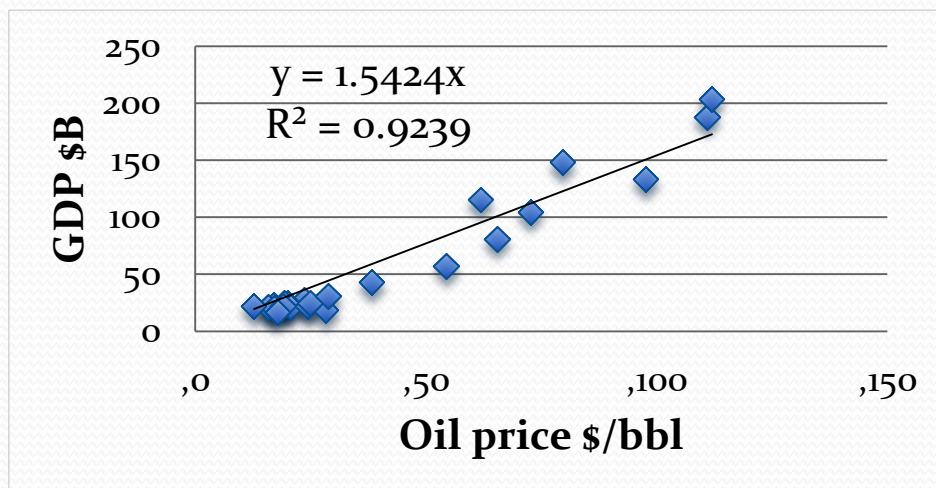
Kazakhstan has necessary conditions for a successful transition to knowledge based economy over the next 30-50 years.

Accumulation of human capital is the most important precondition for a transition to knowledge based economy and can be fulfilled by mobilization of resource rent.

Climate change may slow down economic development.

Climate change may be successfully mitigated if Kazakhstan secures a steady convergence to knowledge based economy.

If convergence to knowledge based economy slows down due to a shortage of human capital, then climate change will become an additional barrier for economic growth.



The TEC and the Technology Mechanism

- Parties in 2010 established the Technology Mechanism with overall objective:

“To enhance action on the development and transfer of technology to support action on mitigation and adaptation to climate change.”

- The Technology Executive Committee (TEC) - the policy and strategy component of the Technology Mechanism
- Climate Technology Centre and Network (CTCN) – the implementation component - to provide direct support to technology actions in developing countries to address climate change
- TEC & CTCN^{is} are mandated to facilitate the effective implementation of the Technology Mechanism under the guidance of the COP

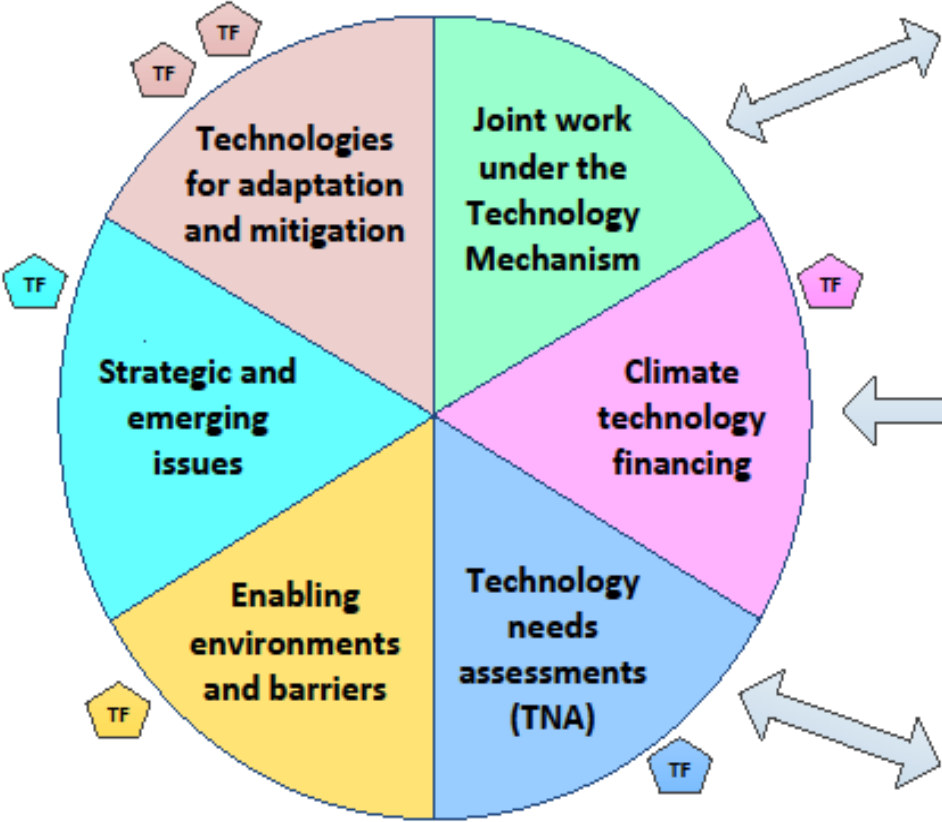
Rolling workplan for 2014-2015 – Overview

Objective of the Technology Mechanism

Priority areas related to the Technology Mechanism

Overall mandate of the TEC

Functions of the TEC



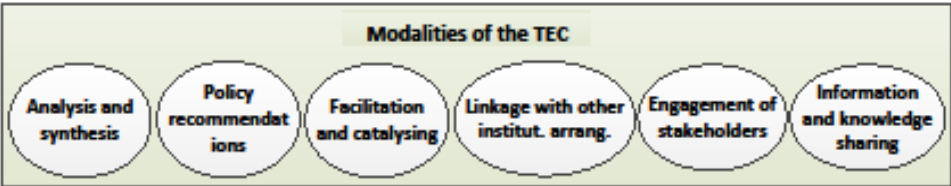
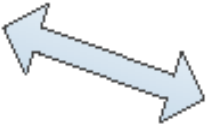
Climate Technology Centre and Network (CTCN)



Financial mechanism



Other UNFCCC planning processes (NAPs, NAMAs, NCs)



Summary

- TEC has been working to promote collaboration with UNFCCC institutions, such as CTCN, AC, SCF, GCF via exchange of information and provide inputs to the work of other bodies as needed
- TEC seeks to promote cooperation with stakeholders and organisations outside the Convention through the participations of representative of these stakeholders in various TEC work